



Coffee Break Training - Fire Protection Series

Standpipe Systems: Standpipe System Reliability

No. FP-2012-36 September 4, 2012

Learning Objective: The student shall be able to summarize the inspection, testing, and maintenance requirements for standpipe systems.

Imagine what a firefighter who needs to use this standpipe hose station outlet to control a fire would think about the local agency's inspection and code enforcement program. While it's impossible to determine from the photograph how long it's been since this Class I standpipe system was serviced, it is evident from the condition of the valve stem—and lack of a hand wheel—that this equipment is impaired and could not be used in an emergency.

The model fire codes require periodic inspection, testing, and maintenance to enhance the reliability and utility of fire protection systems. (See Coffee Break Training 2012-17 for a definition of these terms.) Without regular care, these systems can become inoperable, putting lives and property at risk. The codes refer users to National Fire Protection Association (NFPA) 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, for service schedules.

Class I standpipe systems—intended for fire department use—must be **inspected** at least once a year. (See Coffee Break Training 2006-41 for an explanation of standpipe system classes.) This is the property owner's responsibility and is often contracted to a company or individual that specializes in fire protection systems and equipment. At a minimum, the inspector is required to inspect—and replace or repair—missing caps, valve handles, and gaskets. As part of its annual maintenance, the hose station valve should be exercised and lubricated or repaired if it does not operate smoothly. Any obstructions must be removed.

Every 5 years, the standpipe system must be subjected to performance **tests** that include a flow test to verify that the water supply still provides the design pressure at the required flow. Manual standpipe systems and semiautomatic dry standpipe systems (Coffee Break Training 2006-42) must be subjected to hydrostatic tests of not less than 200 pounds per square inch (psi) (13.8 bar) pressure for 2 hours or at 50 psi (3.4 bar) in excess of the maximum pressure, where maximum operating pressure is in excess of 150 psi (10.3 bar).

For additional information, refer to NFPA 25, Chapters 6 and 13.



This Class I hose station outlet needs attention to make it usable for the fire service. *Photo courtesy of Byron Blake.*



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